

# Sound Conditioning for the Restaurant and Dining Room



**Curbing Noise  
Brings Customers Back**





**An Acousti-Celotex\* installation in Herringbone pattern assures quiet eating comfort in The Brown Derby, Hollywood, California.**

\*Acousti-Celotex is the registered brand name of sound absorbing, perforated fibre tiles marketed by The Celotex Corporation.





## Noise . . . Enemy of Dining Comfort

Noise seems to be an inescapable by-product of restaurant operation. If the clatter and chaos of kitchen or service-counter has already been isolated, at least there remains the din of table service and conversations.

Unfortunately, this undesirable racket has, in most instances, a definite biological effect on appetite and digestion. It dulls the one and retards the other. Not only does excessive noise affect the size of patrons' orders, it actually drives away many customers to quieter eating places.

Healthy appetite induces free-flowing salivary juices. But it has been proved that noises louder than the human voice interfere with the secretion of saliva. They cause a certain amount of stricture in the muscles. In short, people neither eat as much, nor enjoy themselves as much, in restaurants that are too noisy.

### What Happens?

This is what happens. Most restaurants have hard surfaced walls and ceilings. Beginning on the instant a noise is produced, a ripple in the air—just like a ripple in water—moves out in all directions. When it hits a hard surface it bounces off and keeps rebounding from other hard surfaces—like a billiard ball bouncing from the table rails. Thus sounds are prolonged to intermingle with new sounds and unless absorbed quickly, create such a nerve-racking din that conversation, or sounds that are intended to be heard clearly, are distorted and confusing.

The constant restaurant noises—clatter of dishes, rattle of silverware, jumbled conversations—result in mental confusion and nerve tension on the part of patrons. Also, these same noises prey on employees, lowering morale, drawing an edge to tempers, blunting all the normal faculties and resulting in lowered efficiency and service.

. . .

**You can give your restaurant the quiet atmosphere that *brings customers back*. This brochure tells you *how*.**



# How You Can Make Your Restaurant QUIET

Everyone has had the experience of entering a room with thick carpet and heavy draperies and noting the pleasing "quiet" that pervades the place. This is because noise is absorbed by the heavy fabrics. It just can't bounce from surface to surface, each sound adding its own set of reverberations. Modern acoustical materials provide the same kind of noise absorption but are permanently efficient regardless of painting or cleaning.

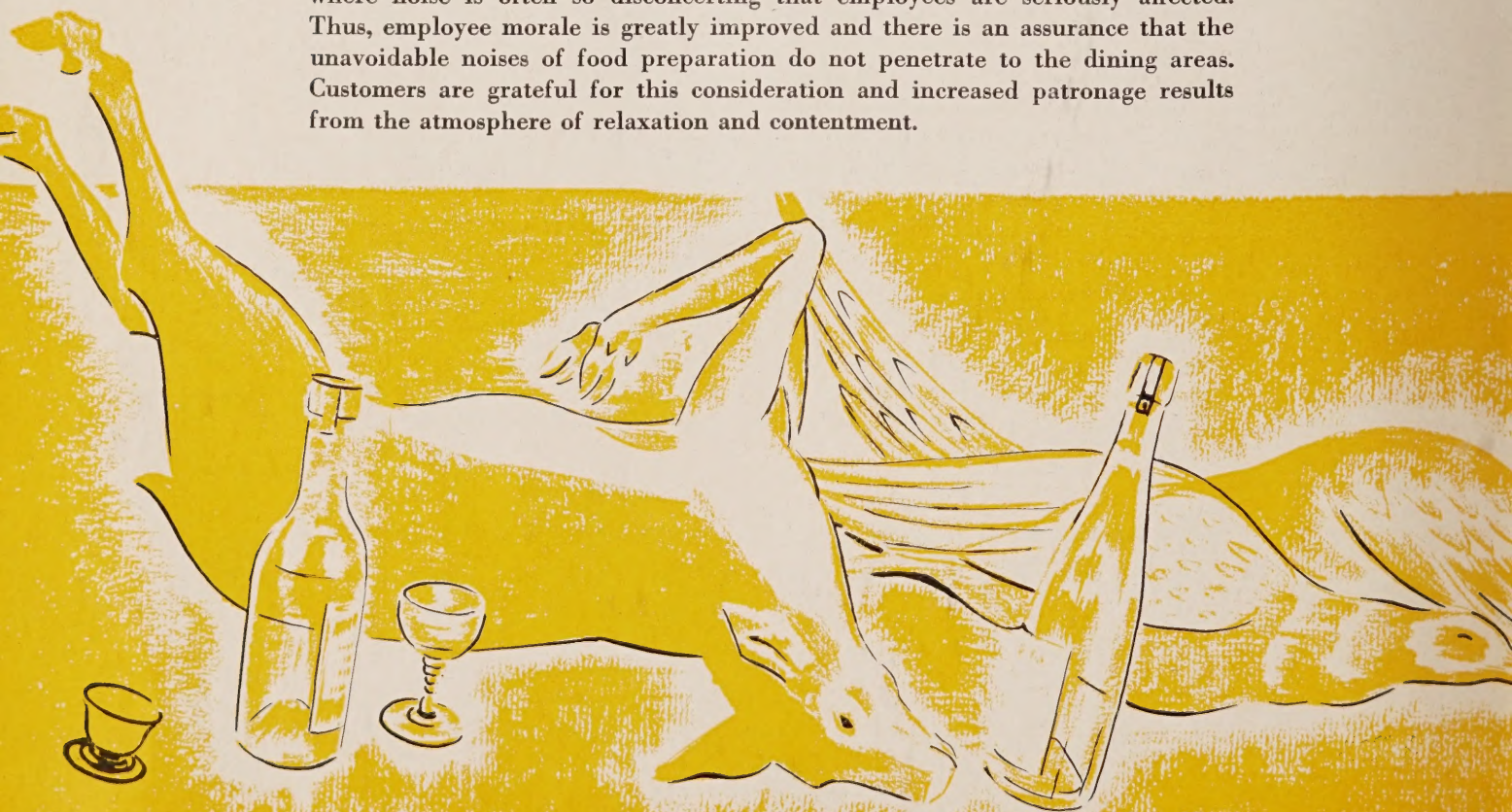
Thus, scientific Sound Conditioning provides absorbing areas at certain points and in specified amounts that stop reverberation. Many hundreds of restaurants have been Sound Conditioned in this way with results that have delighted management. One restaurant figured that the entire job cost less than 25 cents per thousand meals! All are enthusiastic in their reports of customer satisfaction.

## Relaxing Comfort

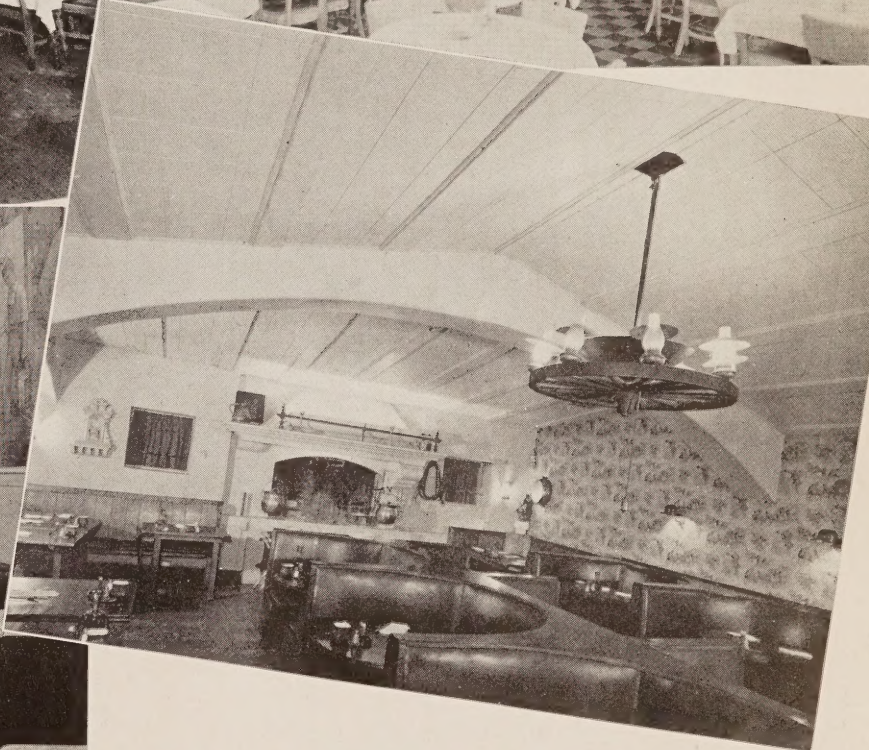
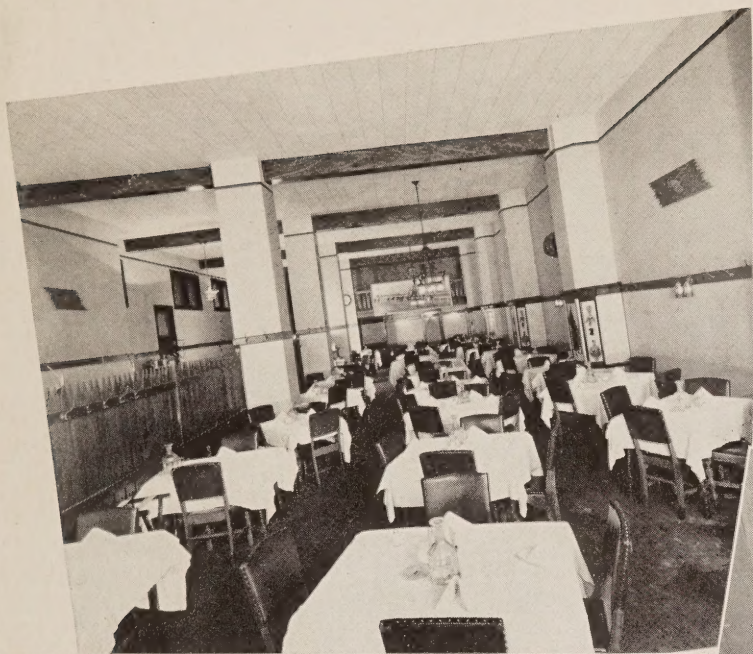
You will find that normal conversations are more confined within the table group. Handling of dishes and silverware is quieted to a hush. Even the crash of occasional dropped dishes is instantly dampened and is practically undisturbing. Where there is music or other entertainment, hearing conditions are vastly improved and much more enjoyable to all patrons. And the improvement in employee service is notable.

The application of acoustical materials to certain pre-determined areas such as ceiling and perhaps some wall space, can bring about this great difference. This is not done by guesswork, but by a competent study of the noise problem and scientific correction to the required degree by trained acoustical engineers.

Many restaurants have installations of acoustical material in their kitchens where noise is often so disconcerting that employees are seriously affected. Thus, employee morale is greatly improved and there is an assurance that the unavoidable noises of food preparation do not penetrate to the dining areas. Customers are grateful for this consideration and increased patronage results from the atmosphere of relaxation and contentment.







*Above, left:* Effective Sound Conditioning installation in the Stebbins Grill, Louisville, Kentucky.

*Above, right:* Miss Hulling's Cafeteria in St. Louis, Missouri, has replaced noise with quiet and secured excellent light reflection by this attractive Acousti-Celotex installation. Architect: Johnson & Maack.

*Left, below:* In Toledo, Ohio, The Buffet has an Acousti-Celotex installation that harmonizes with their attractive mural decorations. Architect: Wilfred D. Holtzman, Jr.

*Right, below:* On Los Angeles' Wilshire Boulevard, The Brown Derby illustrated here has made an exceedingly attractive Acousti-Celotex installation that has brought quiet to this intimate type of eating place.

## MENU

### Lunch

Hot Chicken	10	Hot Chicken	10
Hot Chicken	10	Hot Chicken	10
Hot Chicken	10	Hot Chicken	10
Hot Chicken	10	Hot Chicken	10
Hot Chicken	10	Hot Chicken	10



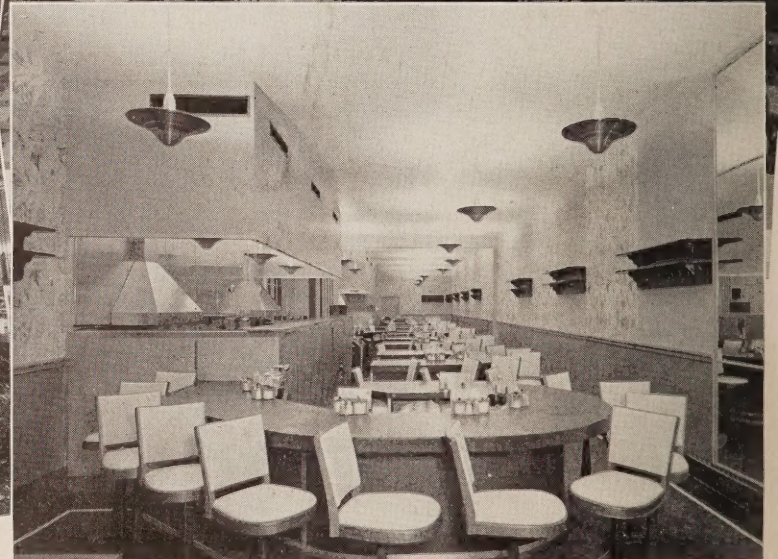
### DINNER

Hot Chicken	10	Hot Chicken	10
Hot Chicken	10	Hot Chicken	10
Hot Chicken	10	Hot Chicken	10
Hot Chicken	10	Hot Chicken	10
Hot Chicken	10	Hot Chicken	10

Hot Chicken	10	Hot Chicken	10
Hot Chicken	10	Hot Chicken	10
Hot Chicken	10	Hot Chicken	10
Hot Chicken	10	Hot Chicken	10
Hot Chicken	10	Hot Chicken	10

Hot Chicken	10	Hot Chicken	10
Hot Chicken	10	Hot Chicken	10
Hot Chicken	10	Hot Chicken	10
Hot Chicken	10	Hot Chicken	10
Hot Chicken	10	Hot Chicken	10





*Above, left:* Horn & Hardart's Automat in Philadelphia is light and much quieter because of Acousti-Celotex.

*Left, below:* Acousti-Celotex in Wolferman's Grillette, Kansas City, Missouri.

*Top:* An Acousti-Celotex installation in the counter area of the Original Coney Island Restaurant in Portland, Oregon.

*Center, right:* Mills Restaurant in Cincinnati has this attractive Acousti-Celotex ceiling.

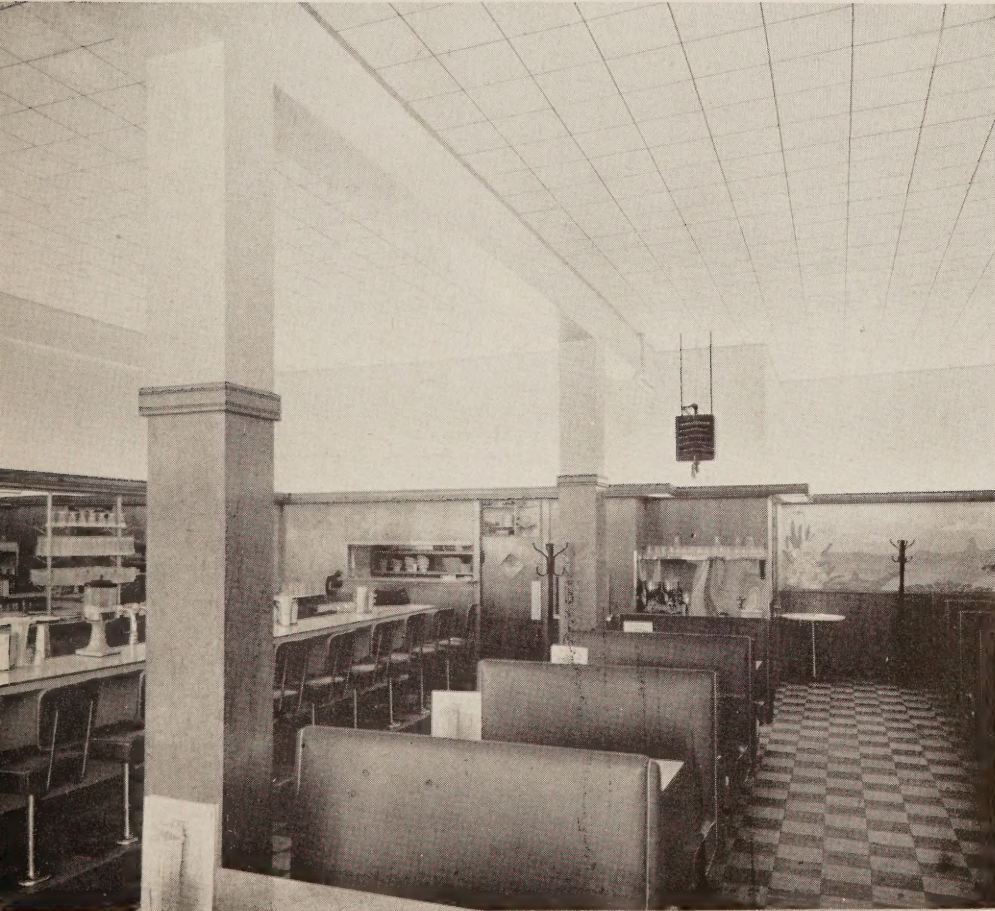
*Lower, right:* Light, clean, air conditioned, this B/G Sandwich shop in Pittsburgh is Sound Conditioned with Acousti-Celotex.





Automat of Horn & Hardart in New York has a delightful pattern of tiles in this Acousti-Celotex Sound Conditioning installation.

Jorgensen's Restaurant in Seattle, Washington, is attractively Sound Conditioned with this standard application of Acousti-Celotex.





# T

# hese questions and answers tell

## **What is "Sound Conditioning"?**

Sound Conditioning is the art and practice of treating interiors so as to minimize the *annoyance* of "unwanted sound."

## **What does Sound Conditioning contribute to restaurant operation?**

It attracts new customers and brings them back repeatedly because of the quiet comfort invariably brought about. It gives an atmosphere of *quality*. It improves the efficiency and courtesy of employees and cuts "time-off" and turnover.

## **How does the employee benefit by Sound Conditioning?**

In a Sound Conditioned restaurant, the employee is relieved of the tension and strain caused by excessive noise. There is less confusion. Employees make fewer mistakes, are less irritable—more courteous; finish their shift with less fatigue.

## **Is Sound Conditioning of Restaurants new?**

No, indeed. Thousands of restaurants, during the past 25 years, have been Sound Conditioned with Acousti-Celotex sound absorbing tile.

## **What is Acousti-Celotex?**

Acousti-Celotex is the name—registered in the U. S. Patent Office—identifying sound absorbing perforated fibre tiles pioneered by The Celotex Corporation, beginning in 1923, and developed into the world's most widely used material in its field.

## **Is it practical to Sound Condition restaurants progressively as funds are available?**

Yes, this is often done, especially where the restaurant is divided into two or more rooms. Sometimes the kitchen is Sound Conditioned before or after the dining rooms.

## **Can Restaurants be Sound Conditioned outside of serving hours?**

Most restaurants can be Sound Conditioned without interruption of the regular schedule of service. Over-night and over-the-week-end installations are

frequently made by the Celotex Sound Conditioning Contractor. He is especially equipped for this service.

## **Is Sound Conditioning expensive?**

No, not with Acousti-Celotex tile. The price today is substantially less than that of the early installations, despite greatly increased costs. Currently, most restaurant installations cost only a few cents per seat, amortized over a period of a few years.

## **How does Sound Conditioning curb noise?**

Sound, or noise, is reflected from a hard surface as light is reflected by a mirror. In the average room with hard plaster walls and ceilings, the sound, travelling at an approximate speed of 1120 feet per second, will bounce around the room in all directions many times before the energy it contains is dissipated, or absorbed.

Sound Conditioning itself does not "stop" noise. Conversations, shuffling of feet, coughing, bells, calling of orders, rattle of dishes and silverware—all generate just as much sound. But the "loudness" is lessened in a Sound Conditioned room because the original sound dies out faster. Since there are no repeated reflections from ceiling to floor and wall to wall, as in an unconditioned room, there is no prolongation of the sound.

## **In what form does sound travel?**

Sound travels in the form of spherical waves, spreading equally in all directions.

## **What happens in a restaurant when the sound waves strike the walls?**

Only a small part of the sound energy is absorbed at each contact and the remainder is reflected back into the room.

## **If the period of reverberation is too long, what are the effects?**

If a single sound remains audible too long after it has been stopped at its source, it is added to the following sounds, creating a complex mixture. When this effect is pronounced, the ear cannot distinguish clearly between the individual sounds and we say that "the acoustics are poor." For instance, an entertainer's words will telescope with those previously spoken making entire



# the story of Sound Conditioning

phrases "blurred," "fuzzy" and unintelligible. In restaurants this "continuing" sound is what makes a constant din, detracting from musical or spoken entertainment and making table conversation difficult.

## Why do acoustical materials absorb so much noise?

All acoustical materials are porous with natural interstices on the surface or mechanical perforations made in the face of the material. The sound impulses enter the maze of tiny spaces in the body of the material. Here the sound waves are "soaked up" by the material rather than reflected back into the room.

## Is there a method of testing materials to determine their ability to absorb noise?

Yes. Here are the ratings of some common building materials and furnishings:

MATERIAL	ABSORBS	REFLECTS
Plaster .....	.025	.975
Concrete .....	.015	.985
Wood Paneling .....	.03	.97
Glass .....	.027	.973
Carpet .....	.20	.80
Acousti-Celotex Type C-4	.70	.30

## How is "Adequate Absorption" determined for a restaurant?

The Sound Conditioning Engineer knows the present sound absorption capacities of the materials and furnishings in a room and how far present average noise levels can be lowered profitably by additional absorption. From this he can easily calculate how much additional absorption is required to bring about a satisfactory result.

## What is the over-all effect of adequate Sound Conditioning in the dining room?

The noise volume is reduced 40 to 60 percent.

## Is Celotex Sound Conditioning used in restaurants only?

No. Acousti-Celotex sound absorbing tile has been used to Sound Condition more shops and stores, offices, schools, hospitals, churches, auditoriums,

factories, radio studios and theatres than any other type of acoustical material.

## Does treatment differ for restaurants of varying sizes and services?

Yes. Each restaurant should be analyzed for the proper amount of the right material in the right places depending on the volume and location of noise and the amount of absorption necessary. Through years of experience and scientific training, the distributor of Celotex Acoustical Products is equipped to render this important service.

## Does installation of Acousti-Celotex Sound Conditioning require structural changes in existing buildings?

No. Absolutely no structural changes are required.

## Can Acousti-Celotex Sound Conditioning be installed in designs to suit individual taste?

Yes. A wide variety of patterns is available in standard materials. The decorative possibilities are without limit. Sound Conditioning is a "natural" when remodeling.

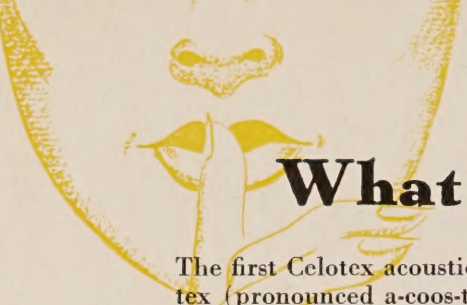
## Who applies Acousti-Celotex Sound Conditioning?

Only approved distributors who have organizations trained for accurate engineering and expert application. These distributors selected by The Celotex Corporation are given thorough training in acoustical engineering and Sound Conditioning practices. Today they constitute the world's largest and most experienced organization in architectural acoustics.

## What is required to maintain areas Sound Conditioned with Acousti-Celotex tile?

Acousti-Celotex tile requires no extra maintenance. It is repeatedly paintable, by any method, without loss of sound absorption. The care required of ordinary painted wall and ceiling areas will keep Acousti-Celotex new in appearance.





# What Kind of Acoustical Material?

The first Celotex acoustical material, Acousti-Celotex (pronounced a-coos-tie cell-oh-tex) was placed on the market 25 years ago. Its revolutionary utility was based on the fact that it could be painted or decorated in any manner without impairing its remarkable acoustical efficiency. Made in the form of a convenient sized tile, cut from a special Celotex cane fibre board, the multitude of perforations extended part way through the board allows sound waves to penetrate to the fibrous interior of the tile where they are absorbed.

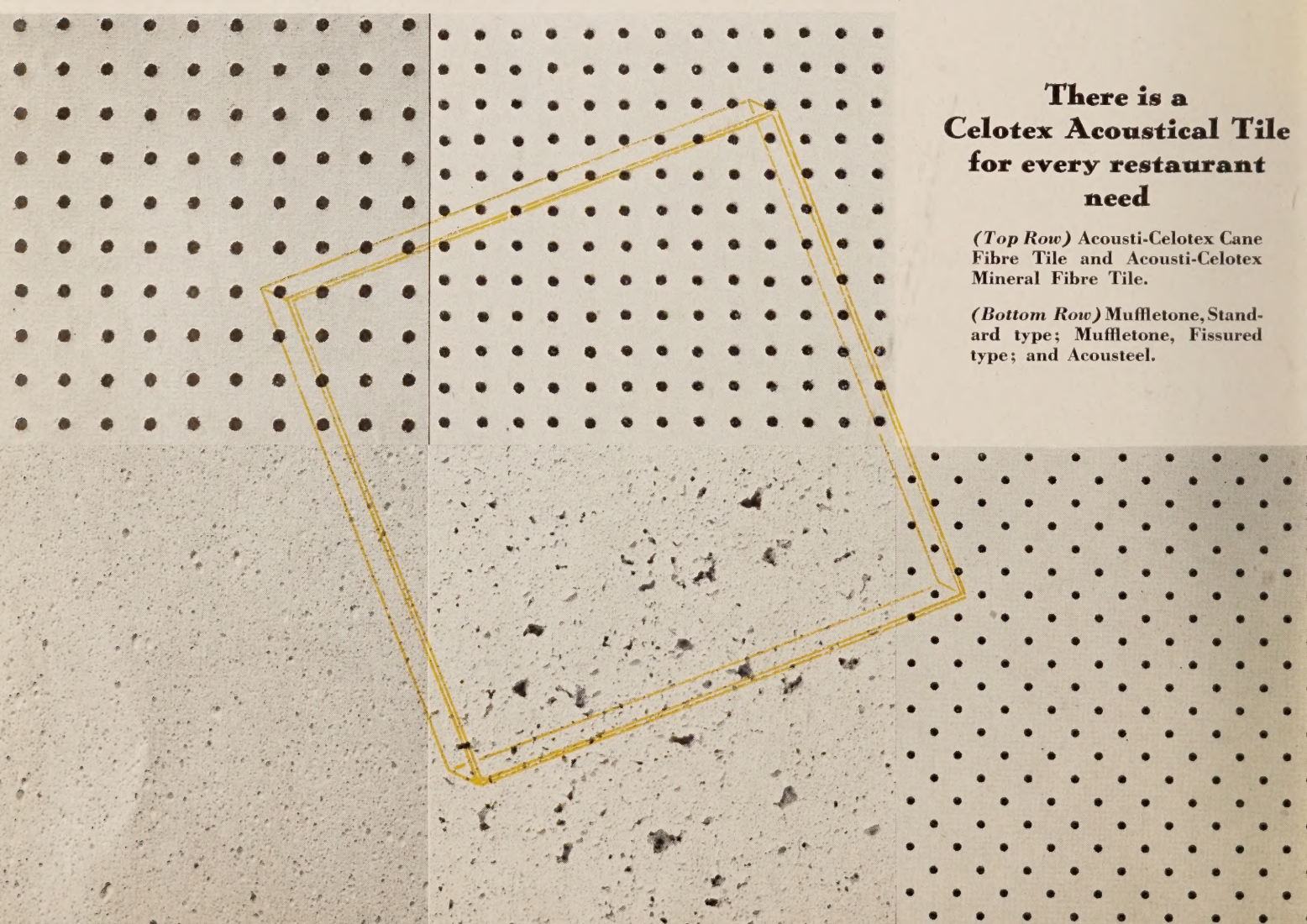
Its tile form, its sound absorbing efficiency, its complete and permanent paintability, its light weight and ease of handling, won immediate acceptance. Uniquely, its sound absorption could be precisely predetermined with the knowledge that it would always maintain this absorption value. Nothing that a workman could do and nothing about its installation could change its precise sound absorbing value. Since that time, the product has been continuously improved in appearance and

efficiency and reduced in price. The basic idea of a perforated paintable tile has remained unchanged, however, with the result that today Acousti-Celotex Cane Tile leads all other acoustical tiles in footage installed.

In the meantime, the market for acoustical material has become so widely expanded and diversified that no single product can meet all requirements. The line of Celotex Acoustical Products has therefore been widened to include Acousti-Celotex Mineral Tile, Acousteel\*, Muffletone\* and other highly specialized items.

Which material to use, how and where to install it for best results, the mechanics of efficient, economical erection—these are technical questions which the local Celotex Sound Conditioning distributor is qualified to answer by reason of his training and experience. As a part of the world's most widely experienced organization in this field, he can be depended upon for competent, efficient service.

\*Reg. U. S. Pat. Off.

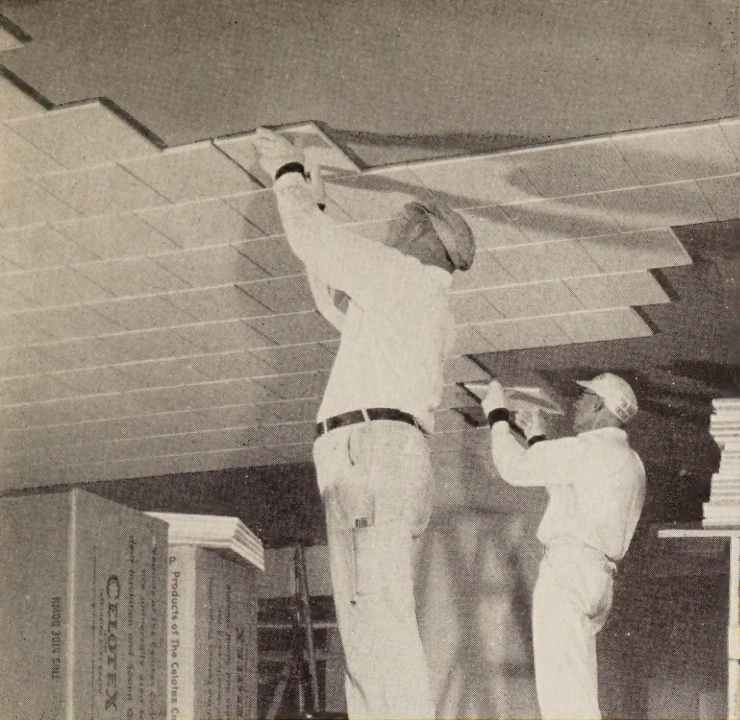


**There is a  
Celotex Acoustical Tile  
for every restaurant  
need**

*(Top Row)* Acousti-Celotex Cane Fibre Tile and Acousti-Celotex Mineral Fibre Tile.

*(Bottom Row)* Muffletone, Standard type; Muffletone, Fissured type; and Acousteel.

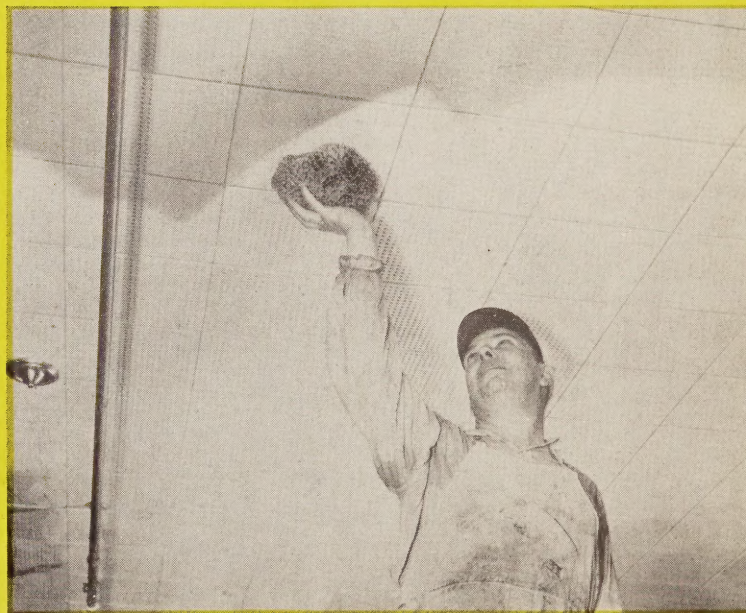
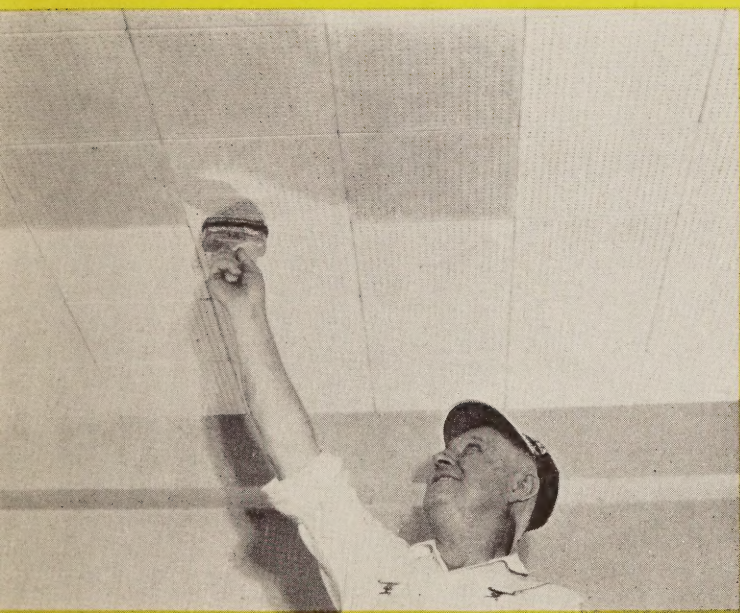




## Installed After Hours or Over Week End

Acousti-Celotex Distributors have special equipment and facilities and are experienced in making acoustical installations in restaurants with little interference to regular routine. If your restaurant

is closed at night, the work can be done then with little difficulty. Or, if a week end serves better, your preference will be followed.



## ACOUSTI-CELOTEX Is Paintable Without Loss of Sound Absorption

There are no extra maintenance costs with Acousti-Celotex tile. Areas Sound Conditioned with this material need only the care and treatment of ordinary wall and ceiling surfaces. Nothing extra is re-

quired. Acousti-Celotex may be repeatedly painted. Use any standard paint. Follow the manufacturer's specifications in applying. Apply by either brush or spray method.



# ACOUSTI-CELOTEX\*

## Sound Conditioning Service

Useful knowledge in science grows with practical experience. Such experience in the field of architectural acoustics consists in the number and variety of problems dealt with. To develop this experience rapidly, The Celotex Corporation in 1925 chose to seek out, school and establish in all principal market centers an authorized engineering, sales and contract service by independent, locally owned and operated enterprises.

The combination of this merchandising policy with Celotex Acoustical Products rapidly won and has steadily maintained a position of leadership in this industry.

This policy, controlled through territory franchises, has been the means of providing architect and owner dependable engineering and application

service. With profits coming only from material sales, The Celotex Corporation has the same interest as an architect and owner in seeing fair job prices established and maintained.

The Celotex Corporation is proud of the service ideals which its acoustical distributor organization, no less than its own personnel, have woven into the fabric of this business. Ability in diagnosing problems, honesty in surveys and recommendations, considerateness as well as promptness in contract application work, and timeless interest in the satisfactory performance of every job—these are what we mean by service ideals.

They constitute plus values written into every specification for a Celotex Acoustical Product.

*\*Acousti-Celotex is the registered brand name of sound absorbing, perforated fibre tiles marketed by The Celotex Corporation.*

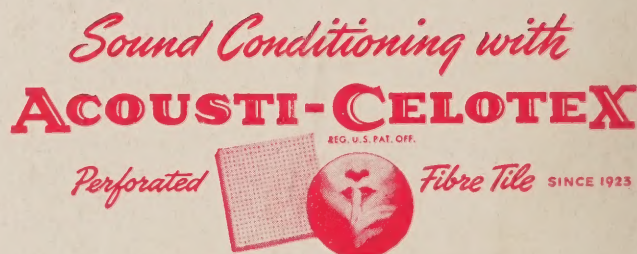
## THE CELOTEX CORPORATION . . . CHICAGO

### Sound Conditioning Is Our Business

For years, in this area, we have been exclusive distributors of Acousti-Celotex Products. We have analyzed, engineered and installed Sound Conditioning in schools, offices, factories, banks, public buildings, stores, churches, hospitals, restaurants, theatres and other buildings.

We are a part of the world's most experienced sound conditioning organization.

Complete information is yours without obligation. Just write or call . . .



THE GEORGE P. LITTLE CO., INC.  
1100 W. 9th Street  
CLEVELAND 13, OHIO  
Telephone: Tower 1-1150